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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,645	07/25/2003	Douglas G. Placek	240932US0	1403

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EXAMINER	
KHAN, AMINA S	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,645	PLACEK ET AL.	
	Examiner	Art Unit	
	Amina Khan	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25 and 27-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25 and 27-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 23, 2006 has been entered.

2. Claims 1-25 and 27-38 are pending. Claims 1 and 6 have been amended. Claim 26 has been cancelled. Claims 31-38 are new.

3. The 35 USC 112 rejections over claims 20,21 and 29 are maintained for the reasons set forth in the previous office action. The applicant did not amend the claims.

4. In view of applicant's amendments, the 35 USC 102(e) rejection of claims 1-9,12-19 and 23-26 over Liesen (US 2004/0092409) is rendered moot. The rejection of the claims is withdrawn.

5. In view of applicant's amendments, the 35 USC 102(e) rejection of claims 1,27 and 28 over Roos et al. (US 2003/0060587) is rendered moot. The rejection of the claims is withdrawn.

6. In view of applicant's arguments, the 35 USC 103(a) rejection of claim 30 over Liesen (US 2004/0092409) in view of Brois (US 5,646,098) is rendered moot. The rejection of the claims is withdrawn.

7. Claims 10 and 11 stand rejected under 35 USC 103(a) over Liesen (US 2004/0092409) in view of Pizzini et al. (US 3,242,455) for the reasons set forth in the previous office action. The rejection is maintained.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-9,12-19,22-25,31-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liesen (US 2004/0092409).

Liesen teaches alkyl(meth)acrylate copolymers to be used in lubricating oils that comprise 10-23 weight percent C_3-C_7 alkyl(meth)acrylate, which meets the claimed limitation of 1-100% of ethylenically unsaturated esters of formula (I); from 77-90 weight

percent C_{12}-C_{14} alkyl(meth)acrylate; and from 0-6 weight percent of at least one C_6-C_{20} alkyl(meth)acrylate, which meets the claimed limitation of 0-99% of ethylenically unsaturated esters of formula (II) (abstract, paragraph 1, lines 1-7). The Liesen prior art further teaches lubricating oil compositions for use in hydraulic fluids (page 7, paragraph 0061, lines 1-5) comprising esters of dicarboxylic acids (page 7, paragraph 0058, lines 1-5), polyol ethers (page 7, paragraph 0059, lines 1-3), and phosphorous containing acids (page 7, paragraph 0060, lines 7-10), which meets the claimed limitation of organophosphorous compounds. Liesen further teaches esters of azelaic, sebacic and adipic acids (page 7, paragraph 0058) and esters of neopentyl glycol (page 7, paragraph 0059). Liesen further teaches that the alkyl(meth)acrylate polymers have a molecular weight between 5,000 to 50,000 (page 5, paragraph 0045). Liesen further teaches that the polymers can be prepared by non-aqueous dispersion polymerization techniques (page 2, paragraph 0030). Liesen further teaches that the lubricating oil diluents be used in a quantity of 15 to 400 parts by weight per 100 parts by weight total monomers (page 2, paragraph 0033; page 7, paragraph 0058 and 0059), which meets the claimed limitation of the weight ratio of polymers to oxygen containing compounds of 2:1 to 1:10. Liesen further teaches the use of the current composition as a hydraulic fluid (page 7, paragraph 0061). Liesen further teaches polymerizing the polymer in the diluent, in this case the oxygen containing compound (page 2, paragraph 0032; page 7, paragraph 0058).

Liesen is silent about the claimed properties of the oxygen containing component of the functional fluid of a fire point according to ASTM D 92 of at least 250°C as

claimed in claim 2 and a kinematic viscosity at 40°C according to ASTM D 445 of 35 mm^2/s or less as claimed in claim 23. Liesen is further silent about the claimed properties of the functional fluid of a fire point according to ASTM D 92 of at least 300°C as claimed in claim 25, a kinematic viscosity at 40°C according to ASTM D 445 of from 28 to 110 mm^2/s as claimed in claim 23, a pour point according to ASTM D 97 of –40°C or less as claimed in claim 24, and a Factory Mutual 6390 Group 1 rating as claimed in claim 1. Liesen further does not teach all the claimed components and claimed percentages in a single example.

It would have been obvious to one of ordinary skill in the art to arrive at a fire point according to ASTM D 92 of at least 250°C and a kinematic viscosity at 40°C according to ASTM D 445 of 35 mm^2/s since Liesen teaches the equivalent oxygen containing components azelaic acid, sebasic acid (page 7, paragraph 0058, lines 2-4), neopentyl glycol (page 7, paragraph 0059, lines 1-3), and tricresyl phosphate (page 7, paragraph 0060, lines 7-10) which would have the claimed fire points and kinematic viscosities. It also would have been obvious to arrive at a functional fluid with a fire point according to ASTM D 92 of at least 300°C, a kinematic viscosity at 40°C according to ASTM D 445 of from 28 to 110 mm^2/s, a pour point according to ASTM D 97 of –40°C or less, and a Factory Mutual 6390 Group 1 rating since Liesen teaches the equivalent oxygen containing components and alkyl(meth)acrylate polymers. One of ordinary skill in the art would expect similar compositions to have similar properties absent unexpected results.

It would have been further obvious to one of ordinary skill in the art to arrive at the instantly claimed invention by selecting the appropriate components and percentages from the teachings of Liesen because Liesen teaches all the claimed components and the appropriate percentage ranges as useful in functional fluids. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch,* 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim,* 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff,* 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

Further, with regard to the limitations of claim 16, the claimed limitations do not need to be met because they are a product by process claim and only the product not the process by which it is produced is given patentable weight. Any difference imparted by the product by process limitations would have been obvious to one having ordinary

skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the examiner to show the same process of making, see *In re Brown,* 173 USPQ 685 and *In re Fessmann,* 180 USPQ 324. The burden is on applicants to show product differences in product by process claims, see *In re Thorpe,* 227 USPQ 964 (Fed. Cir. 1985); *In re Best,* 195 USPQ 430 (CCPA 1977); *In re Fessman,* 180 USPQ 324 (CCPA 1974); *In re Brown,* 173 USPQ 685 (CCPA 1972).

10. Claims 1 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roos et al. (US 2003/0060587) in view of Liesen (US 2004/0092409).

Roos et al. teaches polymer compositions for use in lubricating oils (page 16, claim 21) consisting of 50-100 wt % alkylmethacrylates with 8-40 carbon atoms (page 4, paragraphs 0080-0086), 0-40 wt % methacrylates of formula (IV) (page 4, paragraphs 0092-0093) which includes methyl methacrylate (page 5, paragraph 0098), 0-40 wt % one or more comonomers (page 5, paragraph 0097), and 1-99% (page 10, paragraphs 0247-0248) synthetic oils (page 9, paragraph 0230) such as organic ethers and esters. Components c,d and e of the Roos et al. are optional (0% by weight) and therefore need not be included (page 4, paragraph 0092; page 5, paragraph 0095).

Roos et al. is silent as to the type of organic ether or organic esters used in the compositions and does not specifically teach carboxylic acid esters or polyether polyols.

Liesen, in the analogous art of lubricating oils, teaches compositions comprising synthetic lubricating oils which are the esters of azelaic, sebacic and adipic acids (page 7, paragraph 0058) and esters of neopentyl glycol with mono and dicarboxylic acids (page 7, paragraphs 0058-0059).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compositions taught by Roos et al. by incorporating the oxygen containing esters taught by Liesen because Liesen teaches the utility of these compounds in producing efficient lubricating oils. Further Roos et al. invites the inclusion of organic ester synthetic oils. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

Regarding the claimed limitation of "octadecenoic acid" as recited in claim 29, the limitation does not need to be met because the only polymer component that octadecenoic acid could satisfy in claim 1 is c) which is an optional component. Octadecenoic acid does not satisfy the formula limitations in claim 1 for components a) and b).

11. Claims 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roos et al. (US 2003/0060587) as applied to the claims above and further in view of Kinker et al. (JP 08209179).

Roos et al. is relied upon as set forth above. Roos et al. is silent as to the type of organic esters used in the compositions and does not specifically teach carboxylic acid esters or polyether polyols.

Kinker et al., in the analogous art of lubricating oils, teaches compositions comprising alkyl methacrylates and 98-99.99 wt percent polyol esters, specifically neopentyl glycol dioleate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compositions taught by Roos et al. by incorporating the oxygen containing esters taught by Kinker et al. because Kinker teaches the utility of these compounds in producing efficient lubricating oils. Further Roos et al. invites the inclusion of organic ester synthetic oils. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

Response to Arguments

12. The declaration under 37 CFR 1.132 filed May 23, 2006 is insufficient to overcome the rejection of claims 1-9,12-19 and 23-26 as set forth in the last Office action because: The declaration is not commensurate in scope with the claims because the applicant's have only shown limited species of monomers for the A component and the B component was only limited to organophosphorous compounds and not to the carboxylic acid esters and polyether polyols. Only examples A and F in the table included in the declaration include both the A and B components, wherein mineral oil is included at a percentage of 85% in example F. Liesen teaches that diluent, of which mineral oil is disclosed as one possibility, may be included in percentages as low as 15 parts by weight to 100 parts by weight of methacrylate monomer (page 2, paragraph

0033). Furthermore, there is nothing in the Liesen reference to teach of fairly suggest that a mineral oil must be included in the composition.

13. The applicant argues "the Declaration provides evidence that a mineral-oil based composition cannot provide the fire resistant properties of the functional fluid of claim 1" is sufficient to render the Liesen and Roos art unobvious.

The examiner respectfully disagrees. Although both references disclose that mineral oil may be used as lubricating oils in the compositions neither reference requires the inclusion of mineral oil. Liesen teaches that natural oil, synthetic oils, or mixtures thereof may be included (page 6, paragraph 0050). Roos et al. also teaches that mineral oils and synthetic oils are preferred additives, with mineral oils being even further preferred (page 9, paragraph 0230). Roos et al. further teaches although synthetic oils are somewhat more expensive than mineral oils, they have advantages in terms of performance (page 10, paragraph 0247). All disclosures of the prior art, including non-preferred embodiment, must be considered. See In re Lamberti and Konort, 192 USPQ 278 (CCPA 1967); In re Snow 176 USPQ 328(CCPA 9173). Nonpreferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler,* 177 USPQ 399.

The 35 USC 103(a) rejection of claims 1-9,12-19 and 23-26 in view of Liesen has been maintained. The 35 USC 102(e) rejection of claims 1,27 and 28 in view of Roos has been withdrawn and resubmitted as a 35 USC 103(a) rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amina Khan
Patent Examiner
June 19, 2006

LORNA M. DOUYON
PRIMARY EXAMINER